

WHAT IS CLAIMED IS:

1. An ink jet head comprising:

a chamber plate having a plurality of pressuring chambers formed therein for storing an ink;

5 a vibrating plate bonded to the chamber plate;

a housing having an ink flow path through which an ink is supplied into the pressuring chambers;

an orifice through which an ink is ejected from the pressuring chambers; and

10 a longitudinal vibration mode piezoelectric element for generating pressure under which an ink droplet is ejected through the orifice;

wherein a thickness of the vibration plate is from 5  $\mu\text{m}$  to 10  $\mu\text{m}$ .

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2. The ink jet head as claimed in claim 1,

wherein the ratio of the thickness of the vibration plate to the width of the pressurizing chamber is 0.03 or less.

20 3. The ink jet head as claimed in claim 1,

wherein the vibration plate is formed by a metal.

4. The ink jet head as claimed in claim 1,

wherein a solution having a viscosity of from 5 to 25 mPa·s is ejected.

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5. An ink jet type droplet ejection device, comprising:  
an ink jet head;

an ejection substrate disposed opposed to the ink jet  
5 head; and

a mechanism for moving one of the ink jet head and the  
ejection substrate with respect to the other;

wherein the ink jet head comprising a chamber plate having  
a plurality of pressuring chambers formed therein for storing  
10 an ink, a vibrating plate having a thickness of from 5  $\mu\text{m}$  to  
10  $\mu\text{m}$  bonded to the chamber plate, a housing having an ink flow  
path through which an ink is supplied into the pressuring  
chambers, an orifice through which an ink is ejected from the  
pressuring chambers and a longitudinal vibration mode  
15 piezoelectric element for generating pressure under which an  
ink droplet is ejected through the orifice.

6. The ink jet head type droplet ejection device as claimed  
in claim 5, wherein the ratio of the thickness of the vibration  
20 plate to the width of the pressurizing chamber is 0.03 or less.

7. The ink jet head type droplet ejection device as claimed  
in claim 5, wherein the vibration plate is formed by a metal.

25 8. The ink jet head type droplet ejection device as claimed

in claim 5, wherein a solution having a viscosity of from 5 to 25 mPa·s is ejected.